Gila County Regional Science Fair Coordinator Handbook 2020

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2020 GILA COUNTY REGIONAL SCIENCE FAIR COMMITTEE

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Resources

- Gila County Schools Website
http://www.gilacountyaz.gov/government/school_superintendent/index.php
- Arizona Science and Engineering Fair Website
www.azscience.org
- Society for Science and the Public
www.societyforscience.org
- Science Buddies
www.sciencebuddies.org

Acknowledgements:
In preparing this handbook, the author utilized materials from the Intel International Science and Engineering Fair Rules and Guidelines 2019-2020, the Southern Arizona Science and Engineering Fair website, the Mendocino County Student Handbook for Science Projects, and (How To) guidelines available online at www.sciencebuddies.org

Why host a Science Fair

Science Fairs offer students an opportunity to explore their world and build scientific knowledge and skills. Competing in a Science Fair utilizes a student's English language arts skills, science skills, mathematical skills, fine arts skills, and critical thinking skills. Independent research (the prelude to a science fair project) is enhanced by the challenge of competition. The competition of a Science Fair can lead to innovation and self-satisfaction. Science Fairs encourage students to strive for their personal best by providing a venue to share their efforts, discoveries, creations, and inventions with others and compare the outcome of their research among other students. Science teaching instruction, that is inquiry-based, promotes more meaningful content for students. Instruction is enriched when teachers allow students to select a science topic for conducting research giving each student the time to explore a personal interest. Teachers can exercise their understanding of student development and learning by guiding student research. They come to realize that as students conduct independent research, each student has an opportunity to individually grow, develop, and learn.

Save the date for the Gila County Science Fair!

The Gila County School Superintendent Roy A. Sandoval is proud to announce that this year's Gila County Science Fair will be held on Thursday, March 5, 2020, at the Gila County Fairgrounds, 900 East Fairgrounds Road, Globe, AZ. 85501.

The Gila County Science Fair can be an educational and fun time for everyone! It is a great environment for the judges to be able to share their expertise with the students. It is also a great way for the students to interact with their peers and discuss their science projects with each other. All projects competing in the Regional Science Fair must be delivered to the Gila County Fairgrounds on Wednesday, March 4, 2020 between 11:00 AM and 5:00 PM. **Projects delivered the day of the fair will be displayed but will not be eligible for judging.** For further information, event updates, and resources please visit our website at http://www.gilacountyaz.gov/government/school_superintendent/index.php

Flow Chart

Student thinks of a question to test for an independent science experiment and proposes idea to teacher/sponsor.

Adult Sponsor reviews project and determines if it is safe for the student researcher and for the test subjects. Adult supervisor consults with school science fair coordinator on the next steps – how to register project and get approval.

If the project requires SRC* approval

Before beginning the experiment, go online and fill out the SRC* approval form and submit request.

If the project does not require SRC* approval

Student conducts independent science research experiment, collects and analyzes data, writes a conclusion and prepares a research.

Student participates in school/district fair.

Student places 1st at school/district fair

School science fair coordinator registers school/district 1st place winners online for the regional science fair. Coordinators acknowledges that student has completed all necessary forms to compete.

Deliver winning projects to the Regional Science fair on Wednesday, March 4 between 11 a.m. and 5 p.m. to the Gila County Fairgrounds.

Attend the Gila County Regional Science Fair on Thursday, March 5, 2020 at the Gila County Fairgrounds in Globe, AZ. Judging is from 8:00 a.m. to 12:30 p.m. Student interviews start at 9:30 a.m. Public viewing of the projects begins at 1:00 p.m. Winners are recognized during an awards presentation at 1:30 p.m.

First place winners in each division and category will qualify to compete at the state science fair in March 2020 in Phoenix. The district/school science fair coordinators are responsible for registering their regional winners for the state competition. **Online registration dates for AZSEF will be sent out as soon as they are available**. Please note: winners in the Elementary and Junior Division have a different process than winners in the Senior Division. Visit www.azscience.org for more information and to register.

Getting Started with your School/District Science Fair

- Set up a meeting with teachers who will be participating in the Science Fair.
- Establish a place and time for the science fair. (before mid- February)
- Distribute student handbook to students participating in the fair. (the handbook is also available online for download as a PDF at http://www.gilacountyaz.gov/government/school_superintendent/index.php)
- Develop a system for project check- in, storage, display, and takedown
- Publicize the fair to parents and community.
- Determine judges for science project categories.
- Order ribbons, certificates, and refreshments. (if desired)
- Work with winning entries to successfully register for the Gila County Regional Science Fair.

About the 2020 Gila County Regional Science Fair

Only first place projects in each division and category from the district level are eligible for competition in the Gila County Regional Science Fair. This reflects the Arizona Science and Engineering Fair (AZSEF) rules which allow only first place projects to advance from the Regional to the State level.

Projects displays may only consist of a tri-fold board (see pages 9 and 10 for attached dimensions and examples), the students research logbook, and a one page abstract (student names may not be on any part of the project display). The official abstract form can be downloaded from http://www.gilacountyaz.gov/government/school_superintendent/index.php as a Word file. Please no water, no soil, animals, or other materials should be displayed as part of the project.

Online registration for the Gila County Regional Science Fair will begin on January 6, 2020. School and district level science fair coordinators will receive email notifications once the online registration website is active. The deadline to register students for the regional science fair will be Friday February 14, 2020 at 12:00 AM. Please schedule your school/district science fairs at least one week prior to this date. Please note that projects involving human vertebrate animals, and potentially hazardous biological agents (this includes mold and bacteria) need Scientific Review Committee (SRC) approval before experiment commences. See Rules and Guidelines on page 8 for detailed information.

DIVISIONS

The Gila County Regional Fair features three divisions of competition:

- Elementary Division- Grades 5-6
- Junior Division- Grades 7-8
- Senior Division- Grades 9-12

All 3 divisions are eligible for state competition.

Elementary & Junior Division Categories:

- Animal Sciences
- Behavioral & Social Sciences
- Cellular & Molecular Biology
- Chemistry
- Computer Science
- Earth & Planetary Sciences
- Engineering
- Environmental Sciences
- Mathematical Sciences
- Medicine & Health Sciences
- Physics & Astronomy
- Plant Sciences

Senior Division Categories:

- Animal Sciences
- Behavioral & Social Sciences
- Biochemistry
- Biomedical & Health Sciences
- Biomedical Engineering
- Cellular & Molecular Biology
- Chemistry
- Computational Biology & Bioinformatics
- Earth & Environmental Sciences
- Embedded Systems
- Energy: Chemical
- Energy: Physical
- Engineering Mechanics
- Environmental Engineering
- Material Sciences
- Mathematics
- Microbiology
- Physics & Astronomy
- Plant Sciences
- Robotics & Intelligent Machines
- System Software
- Translational Medical Sciences

Gila County Regional Science Fair Rules and Guidelines

1. All projects must adhere to the requirements of the AZSEF and the Intel ISEF. Knowledge of these requirements is the responsibility of the student and Adult Sponsor. A full list of all requirements can be found online at https://student.societyforscience.org.
2. Before experimentation begins, a Scientific Review Committee (SRC) must review and approve projects involving human participants, vertebrate animals, and potentially hazardous biological agents. For project review and approval, visit www.azscience.org. SRC approval requirements apply to Elementary, Junior, and Senior Divisions.
3. Senior Division projects may require additional forms. These can be downloaded using the ISEF Rules Wizard at https://student.societyforscience.org/forms (There is also a link at the bottom of the regional, state, and international fairs if the project advances.
4. Team projects compete and are judged in the scientific category of their research field. Teams may have 2 or 3 members. Team membership cannot be changed during a given research year, including converting from an individual project to a team project or vice versa. Each team member must submit all required forms. Full names of all team members must appear on the abstract.
5. Students that place first in their division and category in their school district fairs are eligible to compete in the Gila County Regional Science Fair.
6. School District Science Fair Coordinators are responsible for registering their student winners for the regional fair. Register students online at https://reg.planetReg.com/E11198391024846 or on our website, http://www.gilacountyaz.gov/government/school_superintendent/index.php, using the Register button after January 6, 2020.
7. **Deadline to register for the Gila County Regional Fair is Friday, February 14, 2020.**
8. Project delivery and set up for the Regional Fair is Wednesday, March 4, 2020 from 11:00 AM to 5:00 PM at the Gila County Fairgrounds. **Projects delivered the day of the fair will be on display but will not be eligible for judging.**
9. Students placing first in their division and category will be eligible to register for the Arizona State Science and Engineering Fair in March 2020 at the Phoenix Convention Center. The Regional Science Fair coordinator will work together with the school coordinators to ensure that students registered.

PROJECTS & DISPLAY REGULATIONS

- In compliance with ISEF regulations, the student's project display summarizes the research project and must focus on the student's work for this year's study with only minimal reference to previous research. Longitudinal studies may present only conclusive data from prior years. (Note: Continuation projects will require a Continuation Project Form to be displayed with the project at the state level.)
- Only one trifold board is permitted. Project boards may not be layered
- The project display must be limited to the work conducted by the student(s) for the project. Very minimal reference to work done by a mentor or others may be included and only for background information or clarification of what the student's research covered. It must be clearly indicated that it was not part of the student's work.
- The only items that may be displayed with the project on the tables provided are:
  - Student's official abstract
  - Student's research logbook
- Maximum size of project:
  - Depth (front to back): 30 inches (76 centimeters)
  - Width (side to side): 48 inches (122 centimeters)
  - Height (floor to top): 108 inches (274 centimeters)
- Forms required at the project, but not displayed include:
  - Adult Sponsor Form
  - Research Plan and Scientific Research Council (SRC) Approval form (if applicable)
  - A photograph/video release form signed by the research subject (or legal guardian if the subject is under 18 years of age) is required for visual images of humans (other than the student finalist) displayed as part of the project)
- Photographs, visual images, charts, tables, and graphs require credits, if applicable.

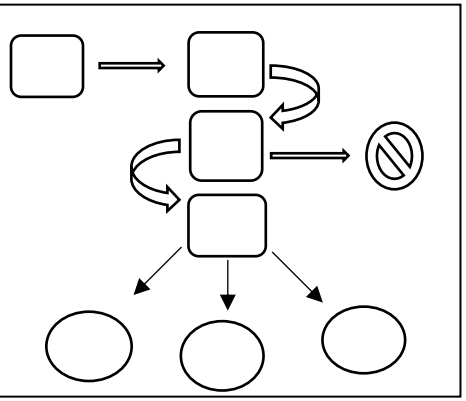
SCIENCE FAIR PROJECT DISPLAY BOARD

122 cm total width

183 cm total height

HYPOTHESIS/ABSTRACT

PROCEDURES



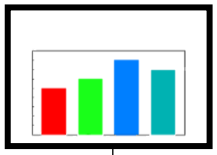
PROJECT TITLE

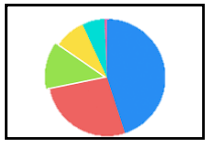
MATERIALS

This is where you can make statements about your project. This is summarized from your abstract, where everything should be stated in detail.

Make sure to explain your purpose for doing this project. What is your scientific question and why is it important?

DATA





Tell about the results of your project in this area. What data have you collected, and did it tell you?

RESULTS

CONCLUSION

76 cm depth